

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018374**Date Inspected:** 24-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr.Xu Le Fung.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

NDT:

BAY 11:

This QA Inspector performed randomly Visual Inspection on OBG bike path bottom cover plate during inspection distortion observed on plate and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as OBG Bike Path Bottom cover plate. The weld designations reviewed are as follows. The notification canceled by ZPMC QA inspector.

BK004A2-022-016, 018

NDT Notification No-07477

BAY 11

This QA Inspector performed randomly Visual Inspection of the area previously tested and accepted by ZPMC Quality Control personnel. The member is identified as OBG Bike Path. The weld designations reviewed are as follows.

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BK004A1-022

NDT Notification No-07476

BAY 10

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Bike Path. The weld designations reviewed are as follows.

BK004ASD1-025-001, 002, 003, 004,

BK004ASD1-025-022, 023, 024, 027,

NDT Notification No-07473

BAY 10

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Bike Path. The weld designations reviewed are as follows.

BK004A5-031-008, 002,

BK004A3-031-010, 002,

NDT Notification No-07474

This QA Inspector observed the following work in progress:

BAY 10:

OBG Bike path, SMAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 056200, 500363 Perform Shielded Metal Arc Welding (SMAW) on OBG Bike path. Joint identified as BK004A1-033-044. ZPMC QC Identified as Lijun. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2214-B-U2.

OBG Bike path, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 052493, Perform Flux Core Arc Welding (FCAW) on OBG Bike path. Joint identified as BK004A1-033-043. ZPMC QC Identified as Lijun. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2232-Tc-U4c-F.

BAY 11:

OBG Repair Welding, SMAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, Perform Shielded Metal Arc Welding (SMAW) on OBG Bike Path. Joint identified as BK005B3-004-002. ZPMC CWI Identified as Yu Dong Ping with temporary welding repair report WRR-B-WR 17570. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G (1F) Repair.

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OBG Repair Welding, SMAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, Perform Shielded Metal Arc Welding (SMAW) on OBG Bike Path. Joint identified as BK005B5-004-008. ZPMC CWI Identified as Yu Dong Ping with temporary welding repair report WRR-B-WR 17571. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G (1F) Repair.

Lift 6, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 046769, 040704 Perform Flux Core Arc Welding (FCAW) on Lift 6 Assembly plate. Joint identified as ESD1-FDSA-6-2-3, 4. ZPMC QC Identified as Shao Hai Lang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

Tower Lift 6 Repair Welding, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040736, Perform Flux Core Arc Welding (FCAW) on lift 6 assembly plate weld build up 3~5mm. Plate identified as FGSA6-1B. ZPMC QC Identified as Libin with temporary welding repair report WRR-T-WR 3750. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-2G (2F) Repair.

BAY 11, Green Tagging

This QA inspector performed Visual Inspection for Green Tagging which were previously tested and accepted by ZPMC Quality Control personnel Mrs. Yu Dong Ping and ABF QA personnel Mr. Zhao Xian He. The members are identified as OBG Bike Path BK004A-022 (Step 10). The green Tag number is identified as # 13851.

BAY 10 and BAY 11

During the Quality Assurance (QA) random visual inspection of OBG Bike path, in Bay 10 # and Bay # 11. this Quality Assurance Inspector (QA) discovered the following issues: ZPMC has temporary tack welded steel plates on top of the Deck plate. The following Bike paths are identified.

- | -Bay # 10, | Bay # 11, |
|---------------|---------------|
| 1) BK004A-027 | 1) BK004A-022 |
| 2) BK004A-030 | 2) BK004A-004 |
| 3) BK004A-029 | 3) BK004A-020 |
| 4) BK004A-028 | |
| 5) BK004A-025 | |

-There are total of four (4) steel plates welded with deck plate of each Bike Path. The approved shop drawings do not specify any welds in these locations. The Top plates are identified as: BKPL1 and BKPL2. The additional material and welding was not approved by the engineer. The steel plate material is unknown. OBG Bike path is located in inside BAY 10 and BAY 11. For further information, please see the attached pictures. Incident report to be generated on this date.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Ho phone : 150002048250, who represents the Office of Structural Materials for your project.

Inspected By: Gaikwad,Shailesh

Quality Assurance Inspector

Reviewed By: Clifford,William

QA Reviewer